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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,607

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Kamen Kanev

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EXAMINER

AZARIAN, SEYED H

ART UNIT

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2624

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,607	Applicant(s) KANEV ET AL.	
	Examiner Seyed Azarian	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-19 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-9, 11 and 43-46 is/are rejected.
- 7) ☒ Claim(s) 10 and 12-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/5/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RESPONSE TO AMENDMENT

1. Applicants' amendment filed, 5/1/2009, see page 8 through page 10 of the remarks, also With respect to cancellation of claims 1-6 and 20-42 and amended claims 7-19 and 43-46 have been fully considered but they are moot in view of the new ground (s) of rejection is necessitated by applicant's amendment is made.

However in brief telephone interview, examiner suggested ways to clarify the independent claim or amend the claim that may overcome the prior art of record, but agreement was not reached.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 43 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 43 define "A surface bearing graphical objects recognizable by digital information capturing means, said graphical objects being patterned so as to predetermine groupings thereof that interrelate by a clustering definition establishing clusters of said graphical objects and that thereby encode primary information at least identifying the placement of the clusters of said graphical objects within the entire pattern of said graphical objects on said surface". Examiner indicates to the best understanding of the invention, surface could be a paper or document with a barcode. The claim appears to be defining an arrangement of data, absent any physical substrate or relationship with a physical substrate, and does not

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define any structural and functional interrelationships. A mere arrangement and data is non-functional description material, which is non-statutory under, (per se MPLP 2106).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 43 and 7-8, are rejected under 35 U.S.C. 102(b) as being anticipated by Zhou et al (U.S. patent 6,418,244).

Regarding claim 43, Zhou discloses a surface bearing graphical objects recognizable by digital information capturing means, said graphical objects being patterned so as to predetermine groupings thereof that interrelate by a clustering definition establishing clusters of said graphical objects and that thereby encode primary information at least identifying the placement of the clusters of said graphical objects within the entire pattern of said graphical objects on said surface (see abstract, the encoded digital information is mapped into the two-dimensional barcode in such a way as to minimize the errors caused by damage to particular rows and/or columns, for example, row damage caused by faxing the printed barcode. To extract the encoded digital information from the printed medium, the printed medium is scanned, then the bitmap is located within the printed medium, also column 6, lines 43-58, FIG. 2 illustrates encoded set of data bits in a two-dimensional grid. Typically, each data bit which is encoded is printed as a matrix of black or white pixels 23. Preferably, a pixel matrix (clusters) representing one data bit

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is square and may be as small as a 1.times.1 matrix to as large as a 6.times.6 matrix (clusters) or more. Non-square matrices may also be used. There are no clocks or borders needed or required in the symbology for PanaMark 20. In the preferred embodiment, the PanaMark 20 is a 20.times.20 array of data bits, although it can be recognized that the size (identifying) is flexible and that the only requirement on the size is that the reading process know the size of the encoded array. In some applications, it may be desirable to include a text label 22 adjacent to the PanaMark 20, although optional and of no significance to either the encoding or decoding process).

Regarding claim 7, Zhou discloses a graphical-object bearing surface as set forth in claim [[6]] 46, wherein the said secondary information relates to a unifying rule for generating an information item by unifying bit data correlated to a plurality of said .graphical-object clusters (column 6, lines 43-58, FIG. 2 illustrates encoded set of data bits in a two-dimensional grid. Typically, each data bit which is encoded is printed as a matrix of black or white pixels 23. Preferably, a pixel matrix (clusters) representing one data bit is square and may be as small as a 1.times.1 matrix to as large as a 6.times.6 matrix (clusters) or more. Non-square matrices may also be used. There are no clocks or borders needed or required in the symbology for PanaMark 20. In the preferred embodiment, the PanaMark 20 is a 20.times.20 array of data bits, although it can be recognized that the size (identifying) is flexible and that the only requirement on the size is that the reading process know the size of the encoded array. In some applications, it may be desirable to include a text label 22 adjacent to the PanaMark 20, although optional and of no significance to either the encoding or decoding process).

With regard to claim 8 the arguments analogous to those presented above for claims 43 and 7 are respectively applicable to claim 8.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 11 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al (U.S. patent 6,418,244) in view of Kuwana (U.S. patent 5,138,197).

However regarding claim 11, Zhou does not explicitly state its corresponding “configuration of a logical block formed by unifying a plurality of unit information carriers being the minimum units for decoding bit data”. On the other hand Kuwana in the same field of decoder teaches (column 2, lines 58-68, the address decoder configured, the first logic block composed of first-channel-type MISFETs and the second logical block composed of second-channel-type MISFETs, in which first and second logical block are arranged side by side, and input wires are formed to supply address signals to the gates of MISFETs forming the first and second logical block. The input wires cross the first and second logical block. The address decoder further comprises output wires extending from the first and second logical block and connected to one another outside these blocks).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Zhou invention according to the teaching of Kuwana because combination of Zhou encoding information and Kuwana address decoder logical block, provides improved document identification system and error correcting code, which can easily be implemented in an scanning device.

Regarding claim 44, Zhou discloses a graphical-object bearing surface as set forth in claim 43, wherein said graphical objects are patterned so as further to predetermine at least one interrelationship that does not encode said primary information (column 8, lines 41-55, during the decoding process, the output bit stream is de-randomized by XOR'ing it with exactly the same key. Hence, it is vital that the encoding and decoding procedures use the same key. It is possible, in rare cases, that the randomized bitstream will be degenerate such that it contains large white or black regions as illustrated by the "bad" PanaMark 60 of FIG. 7A. To avoid this scenario, the encoding procedure can "optionally" choose from among a small assortment of possible keys. The selection is guided by the quality (i.e., the randomness) of the output bitstream. Even though the decoding procedure cannot know a priori which key the encoding side has used, it is a simple matter to try each key and confirm the results using the output from the ECC process, i.e., the correct key will be the one that produces the fewest number of errors from the ECC process).

Regarding claim 46, Zhou discloses a graphical-object bearing surface as set forth in claim 43, wherein said graphical objects are patterned so as further to predetermine an arrangement of said graphical-object clusters relative to each other that encodes secondary information different from the primary information (column 6, lines 43-58, FIG. 2 illustrates

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encoded set of data bits in a two-dimensional grid. Typically, each data bit which is encoded is printed as a matrix of black or white pixels 23. Preferably, a pixel matrix (clusters) representing one data bit is square and may be as small as a 1.times.1 matrix to as large as a 6.times.6 matrix (clusters) or more. Non-square matrices may also be used. There are no clocks or borders needed or required in the symbology for PanaMark 20. In the preferred embodiment, the PanaMark 20 is a 20.times.20 array of data bits, although it can be recognized that the size (identifying) is flexible and that the only requirement on the size is that the reading process know the size of the encoded array. In some applications, it may be desirable to include a text label 22 adjacent to the PanaMark 20, although optional and of no significance to either the encoding or decoding process).

With regard to claims 9 and 45 the arguments analogous to those presented above for claims 1, 7, 11 and 44 are respectively applicable to claim 45.

Allowable Subject Matter

7. Claims 10 and 12-19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Seyed Azarian/

Primary Examiner, Art Unit 2624

July 25, 2009